IntegratedEA

STRATEGY • OPERATIONS • TECHNOLOGY

6-7 March 2012, One Great George St, London

Conference Programme

Please note: Presentations will be available for download from www.integrated-ea.com after the conference. Notification of when they have been uploaded and a password to access the presentations will be emailed to delegates in due course.

Twitter: #IEA12 @IntegratedEA

Wi-fi is provided free of charge by the venue:

Username: ICEmar

Password: STEPHENSON

Day 1

08:30-09:30	**Welcome and Registration**
09:30-09:40	**Conference Introduction - *Ian Bailey**, Model Futures*
09:40-10:20	**KEYNOTE: Enterprise Architecture in NATO** ***David Burton,** Chief Technology Officer, NATO C3 Agency*
10:20-11:00	**The Evolution of Enterprise Architecture and BPM in the Ministry of Defence, Singapore** • Evolution and the 3 S-Curves • Enterprise Approach towards Cost Savings and Enterprise Agility – Ensuring Business - IT alignment – Managing the complexities of IT – Breaking the silo barriers – Moving up the EA maturity ladder • Operationalising BPM through Technology - the BPM Eco-System & "Sight-Seeing" Capabilities • Case Study on MINDEF's Personnel Command, the journey towards Process Excellence. ***Tan Song Beng**, Senior Systems Architect, Defence Science & Technology Agency, Singapore* ***Elton Lim Joon Ann**, Systems Architect, Defence Science & Technology Agency, Singapore* ***Lt Col Edlin Tan**, Asst Chief Information Officer (NS Matters), Ministry of Defence, Singapore* ***Mr Poon See Hong** - Head Business Process Management Department, MINDEF Information Systems Division, Ministry of Defence (MINDEF), Singapore*
11:00-11:30	**Refreshment Break**
11:30-12:00	**Developing the Architecture for the Soldier of Tomorrow** • Describes the development of the Soldier System Architecture (SSA) to define the support the MoD acquisition strategy for its future procurement approach. • Explains the development of the MODAF model of the soldier from the top level operational views down to the system level views and detailed interfaces. • How the human element of the soldier system has been captured as part of the overall architecture. • How the development of the architecture, use cases and operational context have become an integrated solution to defining the user requirements. ***Paul Sibson,** Principal Consultant, Systems Engineering Lead,* *Systems Engineering & Assessment Ltd (SEA)*
12:00-12:30	**Capability Architecture – Mind the Gap!** • Business and IT projects failing to achieve their goals – Why EA is not delivering the value to the business that it could • The shortfall between what IT projects are delivering and what is required to achieve the business goals • Clarifying key business drivers and goals • Capability architecture: Providing a common language and framework to describe the world in business terms • Adopting a truly technology independent start point to bridge the gap between what IT delivers and what the business expects ***Jason Hill,** Partner, Glue Reply*
12:30-13:30	**Lunch**

	Palmer Room: **Technical Session** Chaired by: ***Ian Bailey,*** *Model Futures*	Telford Theatre: **Niteworks Session** Chaired by: ***Mike Wilkinson,*** *Niteworks*
13:30-14:00	**MODEM - Reengineering the M3 based on the IDEAS foundation model** ***Lt Col Mikael Hagenbo****, Swedish Armed Forces HQ* ***Lars-Olof Kihlström****, Generic AB* ***Chris Partridge****, BORO Solutions*	**Embedding Architecture in the Enterprise** ***Luke Tucker****, Niteworks* ***Wg Cdr Alex Hicks****, UK MOD*
14:00-14:30	**Enterprise Architecture Approach at European Space Agency** ***Robert Suzic, Niklas Lindman,*** ***Daniele Gianni, Joachim Fuchs****, ESA*	**Architecture for Rapid Technology Insertion** ***Stuart Armstrong****, QinetiQ* ***Lt Cdr Fred Baxter****, UK MOD*
14:30-15:00	**Refreshment Break**	
15:00-15:30	**Spicing-up IBM's EA tools with Petri Nets** ***Kirsten Sinclair,*** *SyntheSys Systems Engineers*	**What does the 'A' in SOSA stand for?** ***Nick Frall****, Niteworks* ***Kevin Wallis****, UK MOD*
15:30-16:00	**An Ontological Template for Business Analysis** ***Prof Matthew West****, Leeds University*	**Architecture for the Front Line** ***Trevor Milburn****, Niteworks* ***Col Gary Jackson****, UK MOD*
16:00-16:30	**The MUST of Metadata** ***Sean Barker,*** *BAE Systems Advanced Technology Centre*	**Architecture for Decision Makers** ***Dave Evans****, Niteworks* ***Dave Camm****, UK MOD SEIG*
16:30-17:00	**Afternoon Tea**	
17:00-18:00	**Panel Session: MOD's System of Systems Approach** Panel Members: ***David Camm,*** *UK MOD SEIG* ***Alistair Murray,*** *Key Systems Advisor, UK MOD* ***Edwin Swidenbank,*** *SOSA Support Chief Engineer, Team Ensure* ***Zoe Williams,*** *Corporate Affairs, Finmeccanica* ***Gp Capt Simon Richardson,*** *UK MOD - Cap CCII*	
18:00-20:00	**Drinks Reception** **Sponsored by Vega**	

Day 2

08:30-09:00	**Welcome and Registration**
09:00-09:40	**KEYNOTE: Heading, Altitude & Airspeed: Service Orchestration, Cloud & Semantics – All or Nothing!** ***Dennis Wisnosky,*** *Chief Technology Officer, US DoD Business Mission Area*
09:40-10:20	**KEYNOTE: The Golden Thread – enabling end to end transparency** ***David Lynam,*** *Chief Information Officer, AWE plc*
10:20-10:50	**Refreshment Break**
10:50-11:30	**The Defence Information Reference Model** ***Gp Capt Stu Jack****, Deputy Head Policy and Standards, MOD CIO ISP* ***Patrick Gorman****, Assistant Head Architecture Framework, MOD CIO ISP*
11:30-12:00	**The Enterprise is a Story: a Narrative Approach to Enterprise Architecture** • Appropriate governance of structures and change is a key concern in enterprise-architectures • Misplaced attempts at 'control' can cripple an organisation's agility and resilience to real-world context and change • A structural spectrum from 'backbone' to 'edge' provides a proven framework to support organisational agility under stable governance • Use whole-enterprise modelling to identify the appropriate nature, content and governance for the 'backbone' core ***Tom Graves,*** *Principal, Tetradian Consulting*
12:00-13:00	**Lunch**
13:00-13:30	**Making Information Perform: Evolving the MIP from Databases to Services** ***Doug Sim,*** *Senior Enterprise Architect, Command and Information Systems Group, DSTL* ***Pawel Jasinski,*** *Chief Architect, RUAG Schweiz AG*
13:30-14:20	**Panel Session: EA Skills and Training** Panel Members: ***GCHQ's Head of Systems Engineering*** *(moderator)* ***Patrick Gorman****, Assistant head architecture framework, MOD CIO ISP* ***Tom Graves,*** *Principal, Tetradian* ***Ian Bailey,*** *Director, Model Futures* ***Matt Rapier,*** *Chief Architect, VEGA Consulting Services Ltd*
14:20-14:50	**Refreshment Break**

14:50-15:20	**Enterprise Architecture as an Automated Instrument to Support Enterprise Transformation – Approach and Practice** • A Case development of an Enterprise Architecture project at large credit information institution in the South America • The approach used to capture information, across the organization, regarding planned and effective changes from heterogeneous sources • The ability to generate and maintain automatically all the architectural representations of the organization, covering both IT and Business • The importance of a dynamic time-based visualization of the architectural artefacts and representations, providing the capacity to visualize the past, the present and the planned future ***Pedro Sousa,*** *Director, Link Consulting & Associate Professor, Technical University of Lisbon* ***Andre Sampaio,*** *Senior Consultant of Enterprise Architecture, Link Consulting, Portugal*
15:20-15:50	**Nordic Battalion Task Force 2020 – Practical Experiences Using MODAF within a Nulti-national Context** • Capability development from doctrine to fighting vehicle • Harmonization of requirements and business development • Architecture to bridge the gap between different national cultures and traditions • Workshops and architecture as base and support for business development • Commonality, and in some cases interchangeability, for operational effect and cost • efficiency ***Björn Blondell,*** *Business Developer, Swedish Defence Material Administration* ***Anders Söderberg****, Senior Consultant, Front End Strategy AB*
15:50-16:20	**From today to tomorrow – an EA approach to managing Capability Transformations** • Practical experience of the application of Enterprise Architectures to support capability management decisions • Discussion of the importance of aligning technical rigour with decision making processes • Exemplar from UK Mine Hydrographic Patrol Capability programme in the use of TRAiDE (TLCM Robust Acquisition inclusive Decision Environment) to support the capability transformation ***Jennifer Mollett,*** *Systems Engineer, BAE Systems, Mission Systems*
16:20-16:30	**Closing Remarks**

Keynote Speakers

David Burton – Chief Technology Officer, NATO C3 Agency

Mr Burton joined NC3A in July 2009. He currently holds the post of Chief Technology Officer (CTO) for NATO C4ISR and Director Sponsor Account for Allied Command Transformation (DSA ACT). In this capacity he has responsibility for driving programmatic and technical coherence of capability programmes across NATO, developing strategic and technical roadmaps for change, and liaising closely with nations and national Industries to support the implementation of Network Enabled Capabilities.

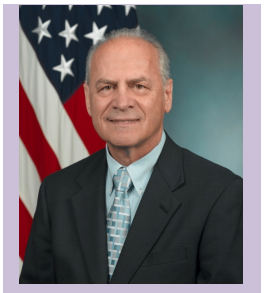
Before joining NC3A, Mr Burton served as a Commodore in the Royal UK Navy in the post of Director Change within the Information Systems & Service Directorate of the Defence Equipment and Support Organisation of the UK Ministry of Defence. In this role he led a major transformational agenda across multiple lines of development.

At the UK Ministry of Defence, Mr Burton worked for the Chief Information Officer with responsibility for the UK Defence Information Exploitation and Enterprise Architecture Programmes. Prior to this he held the position as NATO's Network Enabled Capability Integrated Project Team Leader based at ACT, Norfolk Virginia.

A Physics graduate of Bristol University, Mr Burton joined the Royal Navy in 1980. After a variety of operational appointments at sea and with the Royal Marines, he attended the Royal Military College of science, where he was awarded a Master's Degree in Design of Information Systems. Project Management experience followed in a variety of strategic Information Systems and organisational change programmes, including Programme Management of major Public Private Partnerships within UK defence. In the late 1990s, he filled a key role within NATO's Maritime Command and Control Information System (MCCIS) Programme and was instrumental in establishing the C4I Programme Office.

Mr Burton is a Chartered Engineer, Chartered IT Practitioner, and Fellow of the British Computer Society; he has also recently gained a Diploma in Company Directorship.

Mr Burton is married and has three daughters- he enjoys keeping fit, although rugby playing days are now sadly behind him.



Dennis E. Wisnosky is the Chief Architect and Chief Technical Officer (CTO) of the Department of Defense (DoD) Business Mission Area (BMA) within the Office of the Deputy Chief Management Officer (DCMO).

As Chief Architect and CTO, Mr. Wisnosky is responsible for providing expert guidance and oversight in the design, development, and modification of the federated architectures supporting the Department's Business Mission Area.

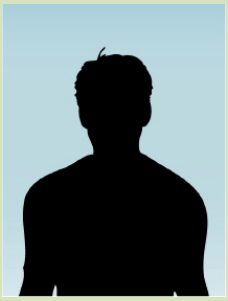
This role incorporates oversight of the DoD Business Enterprise Architecture (BEA); the corporate level systems, processes, and data standards that are common across the DOD, in addition to the business architectures of the services and defense agencies.

Mr. Wisnosky is leading the transformation of architecture-driven business systems and services development, and deployment. He ensures that Business Process Models are based on a standardized representation, enabling the analysis and comparison of end-to-end business processes leading to the re-use of the most efficient and effective process patterns and elements throughout the DoD Business Mission Area. A key principle in DoD business transformation is its focus on data ontology and semantic web methods. Mr. Wisnosky also serves as an advisor on the development of requirements and extension of DoD net-centric enterprise services in collaboration with the office of the DOD Chief Information Officer (CIO).

Mr. Wisnosky has over 25 years of experience in manufacturing, Information Technology (IT), engineering, consulting and training, including extensive experience in business process reengineering and enterprise architecture efforts. His specialty is deriving solutions to effectively move organizations from their "as-is" state of inefficiency to their "to-be" state of achieving strategic and tactical objectives. Mr. Wisnosky is recognized as a creator of the Integrated Definition (IDEFs) language, the standard for modeling and analysis in management and business improvement efforts. In addition, he is the author of several books including DoDAF Wizdom, considered the decisive source within DoD and other government organizations for managing enterprise architecture projects. Mr. Wisnosky holds a bachelor's degree in Physics and Mathematics from California University of Pennsylvania, a master's in Electrical Engineering from the University of Pittsburgh, and a master's in Management Science from the University of Dayton. Mr. Wisnosky has received numerous awards and honors for his work. In 2007 Mr. Wisnosky was a recipient of Federal Computer Week's, Federal 100 Award.

Mr. Wisnosky is a PADI certified Rescue Diver, and an Instrument Rated Private Pilot in Multiengine Aircraft. He and his wife live in Naperville, Illinois; they have three daughters and eight grandchildren.

Speaker Profiles



Stuart Armstrong is the Chief Technology Officer for QinetiQ's Simulation and Training Group. Stuart started his career at the Defence Evaluation and Research Agency (then part of the UK MOD) in 1999, developing defence simulations and joined QinetiQ when it was privatised in 2001. Since then, Stuart has been responsible for the practical exploitation and application of many simulation technologies in support of a wide and diverse military user base.

In his role as CTO, Stuart provides advice and support to senior UK MOD decision makers on the impact of emerging technologies on the UK training and education policy. Through his work, Stuart has introduced the concept of Serious Games to the UK military training landscape and has developed numerous novel training applications from the technology. In particular, the fielding of two Urgent Operational capabilities based on games technologies has helped save UK military lives in current operations.

Stuart is currently the chief architect for the UK MOD's Training Transformation program which is developing the core MOD simulation architecture that will enable the rapid exploitation of emerging technologies. The core architecture is being used to support the delivery of future Aviation, Ground Based and Fast Air training capabilities and will enable the UK MOD to potentially realise significant savings through the re-balancing of live and synthetic training.

Stuart is the chairman for the pan-industry research program into commercial technologies undertaken as part of the UK's Synthetic Environment Tower of Excellence, is the national lead and chair of the US, UK, Canada & Australia technical co-operation on commercial technologies and has chaired numerous NATO working groups on the use of emerging simulation technology. Stuart is also an active member of the I/ITSEC Serious Games Showcase & Challenge Project Team.

Sean Barker

Graduating in Mathematics from Imperial College, London in 1975, Sean originally worked as a Radar Systems Designer for Marconi Avionics, followed by an academic interlude as a research fellow in Computational Geometry. Since 1990 he has worked for BAE Systems initially as team leader for the in-house CAD modelling system, then leading on Information Management and Data Exchange, before being seconded to a joint venture with Dassault Avionics in 1997, developing methodologies for Product Data Management.

In 2000 he returned to the UK to work at the Advanced Technology Centre in Bristol. There he specialises in the relation of enterprise integration to information integration. He worked in the STEP community (ISO 10303), particularly the development of the standards for Product Life Cycle Support and Systems Engineering, particularly the adoption of OWL as the reference data mechanism. He continues this work as BAE Systems representative to the Technical Advisory Committee of PDES Inc. His STEP involvement also led on to Long Term Data Retention, where he contributes to the LOTAR standard and is the BSI's UK Principal Expert for the Aerospace sector.

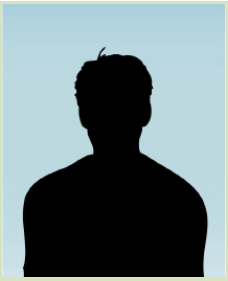
Recent work has focussed on the application of ontology methods to information integration, and has led to work with Professor Ian Horrocks of Oxford University on a system to reconfigure queries to meet the sources available at the time of the query. This is part of an "Information Cloud" where meta data is a key enabler to making information available on demand.

Mr Tan Song Beng - Senior System Architect (Personnel, Admin & Finance Business Area) Defence Science & Technology Agency (DSTA), Ministry of Defence (MINDEF), Singapore

Song Beng is a pioneer in the setup of the Enterprise Architecture for MINDEF. He introduced the EA framework, EA tool & modelling convention to MINDEF in 2006. Since then, he has trained more than a thousand of people to develop their target architectures. In 2009/2010, he was involved in the EA Governance during which he validated hundreds of projects to ensure the quality of artefacts submitted before any implementation.

Since 2010, he is involved in the development of the Singapore Armed Forces Human Resource (SAF HR) Business Architecture. Through the course of his work, he introduced architecture analytics to MINDEF/SAF. This capability allows SAF HR to perform impact analysis on strategy, policy, process, people & system through Enterprise Architecture. In 2011, he introduced the concept of the Process Excellence Eco-System to SAF HR.
The eco-system emphasise on using model to strategise, improve, implement, training of users, testing & monitoring of processes. This will ultimately help SAF HR to achieve Process Excellence.

Education
BSc in Information System & Computing (Hon) University of London. (2000)
Certified Practitioner in The Open Group Architecture Framework, TOGAF (2006)
Certified Enterprise Architect, Carnegie Mellon University, US (2008)



Björn Blondell is Head of Business Development and responsible for the unit doing Model Based Capability Development using facilitated meeting for accessing group knowledge. Björn has a past in business strategy, innovation and consumer marketing in the non-military sector specializing in commercial intelligence work competitive strategies and tactics.

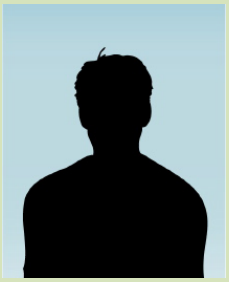
Björn holds a Master of Science in Engineering Physics, Applied Mathematics from the Royal Institute of Technology, Stockholm. Björn lives outside Stockholm with his family

David Camm initially joined MOD as a student engineer at RAE Farnborough and after university re-joined RSRE Malvern as a graduate engineer.

David initially worked in a section providing communications support & solutions to forces in Northern Ireland. From that he moved into a research area looking at the application of commercial communications and information infrastructure technology & protocols to the tactical military environment and then became the MoD Chief Engineer for 2 communications systems – Cormorant and Falcon – taking them from pre-concept phase to beyond main gate. During this period David became the group leader of the Information Communications Systems group within Dstl (Defence Science and Technology Laboratory). David also chaired the Theatre Networking Working Group within the Communications and Networks Sub-committee of the NATO C3 Board responsible for the development and maintenance of interoperability STANAGs between tactical and theatre formation communications systems, together with a responsibility for technical review of a number of NATO communications initiatives and architecture concepts.

David is currently the Deputy Head Engineering within the Systems Engineering and Integration Group (SEIG) within DE&S with responsibilities for the development and delivery of the MoD System of System Approach (SOSA) to ensure interoperability is designed in to a project and programme and that emergent System of System issues are considered at each stage of a system planning, development and use. David also has responsibility for Human Factors policy, standards education and practice in DE&S and promotion of use of Systems Engineering & MODAF.

David is a chartered engineer and fellow IET and of DE&S.



David Evans. David is the Chief Architect for Niteworks and brings a variety of experiences from central government, defence and wider industry in the pragmatic application of Enterprise Architecture to meet a variety of business goals. He is currently on secondment from BMT HiQ Sigma where he is the Capability Manager and responsible for the delivery and development of the company's methods, processes and techniques in Systems Engineering and Programme Management.

Nick Frall is a principal consultant with 20 years experience of Information and Communications Systems (ICS) and ICS enabled change. He has a technical background covering many aspects of defence communications from application integration to radios, with particular expertise in network integration and ICS governance.

Beginning his career in MOD and the Research Establishments Nick then moved into QinetiQ. On leaving in 2006 he joined Atkins to lead their work on ICS integration architecture for MOD's Integration Authority.

In 2008 Nick moved into management consultancy and joined the MOD's Key Systems Advisor team where he worked on Capability Architecture and SOSA governance, setting up MOD's Network Capability Authority. Nick started his own consultancy business in 2010 and now works for the Niteworks partnership as Chief Systems Engineer.

His current project portfolio for Niteworks includes work on network and service architecture, cyber and acquisition agility.

Joachim Fuchs is Head of the System Modelling and Functional Verification Section at the Technology Centre of the European Space Agency. In this role he is responsible to support most European Space projects in the area of simulation as well as system verification. His group also supports corresponding standardisation activities and he defines and execute R&D activities in that domain. Model-based system engineering from complex systems to system-of-systems form the main focus area in his present work.

Patrick Gorman MSc BSc (Hons) MBCS CITP, Asst Head Architecture Framework, MOD CIO

Patrick joined the MOD in 1978, initially working in the south of England employed in administrative roles in Army logistics and recruiting before joining the MOD IT profession where he worked managing and providing technical assurance for Army transport, catering and education information systems.

He moved to Main Building in 1997 to work as a programme co-ordinator on MOD's Capital Programme (resource accounting) before transferring to work on capability planning within the Joint Battlespace Digitisation Programme. In 2001 he transferred to the Information Coherence Framework Group where he managed the compilation of policy for Managed Services.

In 2002 and 2003, Patrick attended a long course at University College London studying for a Master's degree in Defence System Engineering, returning to work as Architectural Adviser for the Integration Authority embedded within the NITEworks team in Farnborough.

In 2006 he returned to Main Building to work on the Director General Information (now

CIO) Enterprise Architecture (EA) Programme where he managed the work-stream on the development and promulgation of the MOD Architecture Framework (MODAF) before taking on the lead for MOD's enterprise architecture strategy and policy, and being appointed Head of Discipline for EA.

Patrick has also been involved in the development of the NATO Architecture Framework, and is the UK co-ordinator for MOD's collaborative work on architecture frameworks with the Swedish Armed Forces.

Tom Graves has been an independent consultant for more than three decades, in business transformation, enterprise architecture and knowledge management. His clients in Europe, Australasia and the Americas cover a broad range of industries including banking, utilities, manufacturing, logistics, engineering, media, telecoms, research, defence and government. He has a broad academic background in arts, sciences and architectures; he initially trained as a typographer and graphic-designer, and was one of the pioneers of desktop-publishing, with extensive experience in the practical and human challenges in business innovation and change. He has a special interest in architecture for non-IT-centric enterprises and the human side of systems.

Lt Col Mikael Hagenbo is the Head of Architecture and Architecture Frameworks at the Swedish Armed Forces (SweAF) Joint Development department at the Supreme Commander's Staff. His main responsibility is to lead the development of SweAF Enterprise Architecture Framework and also to co-ordinate, and in large extend execute, international and national agency co-operation within the EA area. Also, Mikael has a leading role in leading the implementation of EA in the SweAF.

Mikael has a background as an Air Force C4ISR officer and has been working with Enterprise Architecture since January 2003 after graduating from the Advanced Technical Programme at the Swedish National Defence College.

Mikael represents Sweden in NATO C3 Board/SC-1/Policy Working Group (and its future successor whatever it will be called) - responsible body for e.g. NATO Architecture Framework, and has been involved during the whole development process of 2 ½ years of the NATO Architecture Framework (NAF) version 3 that was approved by NATO in November 22 2007.

Finally, Mikael acts as a Swedish representative in International Defence Enterprise Architecture Specification (IDEAS) (http://www.ideasgroup.org) management group and also co-ordinates the bilateral co-operation with MOD UK within the EA area. Currently, Mikael has the role as chairman in IDEAS. Within the program of work of IDEAS, Mikael has the current lead for the on-going development of the MODAF Ontological Data Exchange Model (MODEM) in close co-operation with the UK MOD CIO organisation.
mikael.hagenbo@mil.se

Wing Commander Alex Hicks - Direct, Process, Disseminate Plans SO1 within Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) Capability area:

Alex Hicks joined the Royal Air Force in 1988 and completed a three year Apprenticeship. He attended the Royal Military College of Science where he read Electrical Engineering, following which he was commissioned in 2000. As 5 (AC) Sqn Senior Engineer at RAF Waddington, Alex was responsible for all engineering and support requirements for the introduction of the ASTOR capability into service. During his tour, Alex deployed to Afghanistan as the Chief of Staff as part of the first ASTOR deployment and also took responsibility for the introduction into service of the Shadow R1 aircraft procured under a UOR. Alex attended the Advanced Command and Staff Course at the Joint Services Command and Staff College. On completion of the course, Alex assumed his current role

as the planner for the Direct, Process and Disseminate functions of Cap ISTAR. During this tour he has developed a revolutionary Capability Management Process, which is now being rolled out across all functions of Cap ISTAR and Cap CCII.

Jason Hill is Partner of Glue Reply. He covers strategy and development for the business as well as playing a key part of the growth of Reply in the UK.

With 18 years' experience in enterprise architecture and solution delivery, Jason began his career in IT at the 'back-end' of the IT value chain working in manufacturing and industrial environments. Often literally on the 'shop floor' and at the end of the production line! Having picked up the pieces from several front-end architecture and design flaws, he is now committed to helping organisations drive genuine business value from IT investments and avoiding costly front end mistakes.

Jason has held senior positions within both software development companies and large system integration companies. Since Glue Reply became part of the wider Reply S.p.A network of Italy, Jason is a Partner within the Group responsible for architecture, technology and consulting.

Gp Capt Stu Jack MBA BEng (Hons) CEng MIET RAF, Deputy Head Policy and Standards, MOD CIO

Gp Capt Stu Jack joined the Royal Air Force in 1984 as an apprentice technician at RAF Cosford. Following a degree at the Royal Military College of Science at Shrivenham he was posted as OC Ground Radio at RAF Cottesmore. Following a second tour at RAF Henlow, he took up independent command of the NATO F4 detachment at RAF Oakhanger.

Promoted in 1998 to Sqn Ldr he was posted to MOD to a tour as the Operational Requirement Sponsor for tactical communications, where he sponsored major upgrades to the RAF Transportable Telecommunications System (RTTS).

Posted in Jul 2000 he arrived at RAF Brize Norton as OC Operations Sqn - 2I/C on Tactical Communication Wing and saw the Unit through a step change in its operational tempo. In Jun 2002 he was posted to HQSTC where he provided A6 advice to the ISTAR role Office.

Promoted Wg Cdr in Apr 2003 he was SO1 A6C2ISR responsible for the ground based surveillance capability. Transferred to lead the transition team delivering DII (C) into the Headquarters he left HQSTC in 2005 to complete a full time MBA at the University of Hertfordshire graduating with a Distinction and the Academic prize in Sep 2006.

He was subsequently posted to the DEC ISTAR in MOD where he had responsibility for Intelligence and Information Operations and Geospatial Intelligence capabilities. He assumed command of Force Generation Wing (90 Signals Unit) in Jan 2008, responsible for the generation of the RAF's tactical communications capability.

He was promoted to Gp Capt in Sep 2009 and posted to the MOD, where he worked for the Defence Information Infrastructure (DII) Senior Responsible Owner where he was responsible for ensuring that the programme met the benefits that were set out in its business case in line with the OGC's Managing Successful Programmes guidance.

In Jan 2011 he was posted to the Chief Information Officers Organisation where he is responsible for Information Policy and Standards. The Policy and Standards organisation sets Information Management policy and co-ordinates all other Information policies across the Department. The team ensure data coherence and standards across all of MOD's process owners and set Departmental Enterprise Architecture guidance and policy.

Colonel Gary Jackson MBE Late RE
Col Gary Jackson was commissioned into the Royal Engineers in 1986. Early regimental duty in Germany and Northern Ireland was followed by professional engineer training and service in Australia, Belize and Bosnia and then command of 33 Field Squadron in Northern Ireland from 1999-2001. He attended Staff College in 2001.

Staff jobs followed in J5 Plans at PJHQ looking after the Cyprus Permanent Joint Operating Base, contingency planning for implementing a unification agreement on the Island and operational planning for Op TELIC 1. Then 2 years on the Directing Staff of the Intermediate Command and Staff Course (Land). He commanded Army Training Regiment Lichfield through its restructuring and move to Pirbright. He worked on contact with Sunni insurgent groups and former regime elements in the Force Strategic Engagement Cell in Baghdad before working for two years on Urgent Operational Requirements in Capability Ground Manoeuvre in the MOD. After an all too brief tour in HQ Theatre Troops, he is now double-hatted as Deputy Head of Technology Delivery in the Programmes and Technology Group at DE&S and DSTL Domain Leader for support to operations.

Gary is married to Joanna and they have 2 children: Hannah and James. He supports Arsenal, enjoys ski touring, fly fishing and takes a keen but mostly uneconomic interest in horse racing.

Lars-Olof Kihlström works for Generic System AB as a senior consultant. His main work area has, since he joined to company in 2003, dealt with architecture framework handling, UML modelling, SOA and requirements management. He has worked extensively with DoDAF, NAF and MODAF. He acted as modelling support in the NAF revision syndicate. He has also actively participated in the IDEAS group and has worked extensively with the development of the MODAF Learning Portal as part of a bilateral co-operation agreement between Sweden and the UK. He has also spent a lot of time dealing with SOA and was involved to a large degree with the development of the MODAF views and NAF views for SOA. He actively contributes to the on-going maintenance of MODAF and has commented UPDM and UPMS approaches extensively.

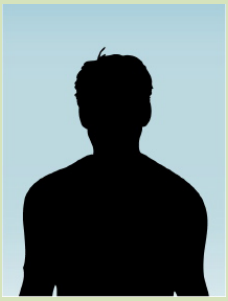
Lars-Olof has a Master of Science degree in Physics Engineering from the Royal Institute of Technology in Stockholm. He has worked as a development engineer, development manager and as a consultant at different companies prior to joining Generic AB, including Swedish Telecom (now Telia-Sonera), Cap Gemini, Enator (now Tieto-Enator), LHS and Telelogic AB. He has a long background in the use of formal specification techniques, object-oriented development (UML) as well as requirements management. He has worked extensively with radio communications and has worked on standardisation, specification and development of different things starting from the embedded arena (communication protocols and automotive applications) up to business processes for larger organisations.

Pawel Jasinski, Master of Science in Robotics and Automatic Control, graduated from the Warsaw University of Technology in 1994. He is an IT architect at Ruag Defence and led a development of the reference architecture for the Swiss Armed Forces. He took a role of architect and software engineer on various assignments involving SOA, virtual simulation and modeling. He has been an active member of the MIP community and participated in the architecture, prototyping and methodology working groups.

Mr Elton Lim - Systems Architect (Business Architecture), Defence Science & Technology Agency (DSTA), Ministry of Defence (MINDEF), Singapore

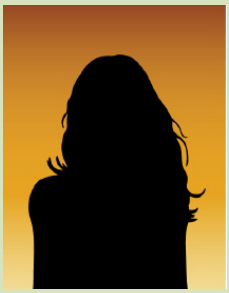
Elton joined DSTA's Enterprise Architecture office in 2007. As a new set up then, Elton played a key role in establishing the enterprise EA standards for MINDEF/SAF and the building up of the EA infrastructure and repository. He played a governance role in ensuring that projects comply to the EA standards and methodology. Today, Elton is involved in the business process studies with the Personnel Command of the Singapore Armed Forces (SAF), leveraging on the established EA foundation and advancing the use of EA tools and technologies to bring MINDEF/SAF towards process excellence.

Education
Bachelor of Science in Information Systems & Software Engineering, Oxford Brookes University, UK (2004)
Masters in Engineering (Technology Management), University of South Australia, AU (2009)
Certified Enterprise Architect, Carnegie Mellon University, US (2008)



Trevor Milburn is an independent consultant. He has provided decision support evidence for the MOD through management and technical support to a range of projects over the last 5 years. His more recent work for MOD through Niteworks has included experimentation and spiral development activities through frontline user demonstrations. Many of the projects have focussed on improvement of MOD's tactical C4ISTAR capability and of its frontline C4ISTAR collective training systems. The development of appropriate integrated architecture building blocks has been particularly important to these projects.

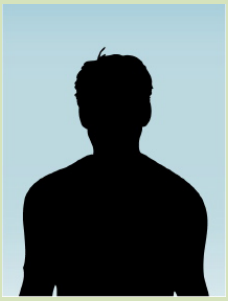
Prior to turning consultant, he was a Director of IT projects and programmes and prior to that had a frontline career in Royal Air Force support helicopters, including command of RAF Odiham. He also served in MOD Main Building in airworthiness, training and operations support posts, in NATO's principal static air HQ AIRNORTH, and in the ACE Rapid Reaction Corps HQ.



Jennifer Mollett is a systems engineer in BAE Systems' Mission Systems with over seven years experience in the defence in both naval and land sectors. Since joining the company straight from university, Jennifer has worked in a range of engineering disciplines including software engineering, project and bid management through to systems engineering.

Jennifer is currently the Capability Engineering Technical Lead for Minewarfare & Autonomy. She is responsible for identifying the operational needs of future systems and implementing a Systems of Systems approach to the development of the solution.

Chris Partridge (partridgec@BOROGroup.co.uk) is Chief Ontologist at BORO Solutions (www.BOROSolutions.com). He has been developing his expertise in business ontology for a couple of decades – working primarily in the defence and financial sectors. He has also published a number of papers and a book – Business Object: Re-engineering for Re-use (Butterworth Heinemann 1996). He has developed an ontology framework – BORO – that is the foundation for the IDEAS (International Defence Enterprise Architecture Specification for exchange) which is the foundation for DODAF 2.0.



Rob Paternoster graduated from the University of Southampton with a 2:1 in Aerospace Engineering before enrolling on the Defence Engineering and Science Group (DESG) graduate scheme. He has 7 years experience as a systems engineer within the Ministry of Defence and has supported numerous teams in realising benefits through the application of the MoD Architecture Framework (MODAF). He is now responsible for delivering the MODAF training programme and uses his extensive knowledge and experience to assist in the development of the System of Systems Approach (SOSA).

Matthew Rapier, Chief Architect, VEGA Consulting Services Ltd leads the Enterprise Architecture Business Unit at VEGA – engaged with customers in Defence and Central Government supporting a range of programmes with architecture skills and experience. In 2011 Matthew presented at IntegratedEA on 'EA on the Front Line' and at the RUSI DIS conference on 'Enabling Information Superiority' - based on his on-going work with MOD's Core Herrick Team and the Network Operating Authority (NOA).

He is supporting several projects for clients including the NOA, CIBM and MOD's industry partners. Matthew leads VEGA's work in Theatre Network and Service Management for Op Herrick, and is a driving force in VEGA's growing roles in the delivery of highly secure ICT solutions to MOD and other government departments.

Before taking up this role, Matthew held the post of Chief Architect for the ATLAS Consortium, the Delivery Partner for the Defence Information Infrastructure programme in addition to similar responsibilities for the HP Enterprise Services Defence and Security business unit. His responsibilities included developing the overall Solution Architecture for DII, establishing and running the DII Solution Governance model. Previously Matthew held a series of roles within the ATLAS CTO function including Battlespace Domain Architect and lead architect for DII Land Deployed.

Matthew's earlier experience is in the architecture and delivery of Operational C2 systems. He was CTO for HP Enterprise Services Defence and Security Operational C2 business, responsible for Joint Operations Command System, Royal Navy Command Support System and related systems.

Matthew is an Open Group Certified Master Architect and Open Group Certification Board Member.

Mr Poon See Hong - Head Business Process Management Department
MINDEF Information Systems Division, Ministry of Defence (MINDEF), Singapore

SEE HONG holds the position of Head Business Process Management Department (Hd BPMD) at the MINDEF Information Systems Division (MISD). As Hd BPMD, his focus is on driving Business Transformation through the application of Enterprise Architecture in MINDEF/SAF. He makes recommendation for business process integration and identification of opportunities for more effective way of conducting business operations in MINDEF/SAF. Today, he remains the key champion in developing the Enterprise Architecture for MINDEF/SAF.

In his previous appointment with the Joint Logistics Department (JLD), he led in transforming SAF legacy systems into an adaptive and scalable enterprise-wide system through the implementation of several important programmes like the SAFwide Enterprise System, MINDEF e-Procurement System and B2B Gateway.

Education

Bachelor Degree in Mechanical Engineering (Honours, 2nd Class), University of Singapore. (1977)
Masters in Military Vehicle Technology, Royal Military College of Science, UK. (MINDEF Training Award 1983)
Advanced Management Program, Information Resources Management College, National Defence University, USA. (2004)
Chief Information Officer Certificate Program, Information Resources Management College, National Defence University, USA. (2004)

André Sampaio, MSc, is a Senior Consultant of Enterprise Architecture in Link Consulting, Portugal, and as participated and coordinated Enterprise Architecture projects in Portugal, Brazil and Luxemburg. He is also the responsible for the development of the Enterprise Architecture Management System (www.link.pt/eams) and has published work subject to the themes of Enterprise Architecture, Enterprise Transformation, System Theory and Formal Viewpoint descriptions.

Pedro Sousa (PhD) is an Associate Professor at Technical University of Lisbon, where he teaches Enterprise Architecture (EA) courses and has more than fifty EA publications. He is also a researcher at Organizational Engineering group at Inov (www.inov.pt) and a Innovation Director at Link Consulting (www.link.pt) and has been responsible for more than twenty EA projects in real organizations for the past fifteen years.

As a professor he is used to public presentations. As a researcher, he has made more than fifty public English presentations in conferences worldwide. As a professional senior consultant he has done over twenty public and international presentations in many forums. The presentations include: IKRM European Enterprise Architecture Conference (London, 2005), Open Group Conference (Lisbon October 2006), CAiSE 09 workshop (Amsterdam, August 2009), Oracle OpenWorld (São Paulo, December 2010), Open Group Conference (London, May 2011) and PRET 2011 (Luxembourg, September 2011).

Paul Sibson joined SEA in October 2007, with initial involvement with armoured vehicle and C-IED systems, joined the Future Dismounted Close Combat (FDCC) research programme in January 2008. Within this programme, Paul has specific responsibility for the overarching issues of DLODs (Defence Lines of Development), Human Factors Integration, Operational Analysis, and led the development of the systems engineering approach to soldier systems.

This led to the award of the Soldier System Architecture contract, and Paul has worked closely with the MoD Integrated Soldier System Executive (ISSE), under the Reducing the Burden on the Dismounted Soldier (RBDS) Capability Vision (CV) programme. As technical lead for this programme, Paul has led a team of engineers and subcontractors to develop the systems engineering methodology and tools to assist ISSE in the development of their User Requirements, the development of the Soldier System Architecture (SSA), define the systems engineering processes, and the test and acceptance approach, in support of the development of ISSEs acquisition strategy. The success of this work has recently led to Paul being appointed as Lead Systems Engineer for the SEA as a whole.

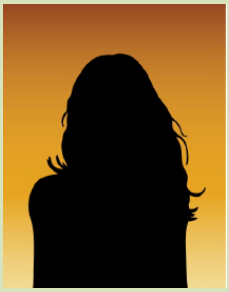
Paul began his career at Westland Helicopters, working in the Advanced Technology Dept., undertaking concept studies and research into future avionic architectures, sensor systems, human factors and simulation, and represented the UK on many international projects.

He then joined Thales Underwater Systems as Human Factors Manager for the upgrade of the Hunt Class minesweeper, responsible for all HF aspects including console and HMI design and development, physical ergonomics, crew interaction, the operations room

environment and seating.

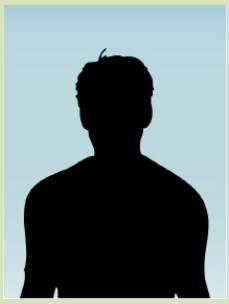
Prior to joining SEA, Paul was the lead systems engineer for the Tactical Processor for the Wildcat helicopter, including the integration of Bowman capability into the airborne environment, HF aspects and system safety.

Doug Sim is the Senior Enterprise Architect within the Command and Information Systems group at Dstl and was the Deputy Chair of the IPT-F at MIP from 2009 to May of this year. He joined Dstl in 2005 and has worked in the Maritime and C4ISTAR domains in a variety of roles including information modeller, system engineer and architect. Prior to joining Dstl Doug worked in the financial sector using UML to capture user requirements and design software systems to help automate and integrate back and front office systems in UK, Europe and the Far East.



Kirsten Sinclair joined SyntheSys in 2009, after working on a project with SyntheSys and Durham University looking at improving the engineering of complex systems. The focus of this research was to help assure the compatibility of information exchanges between component systems. During this time she completed her Ph.D. thesis looking at how use of modelling techniques can improve the engineering of complex systems, in particular their specification, verification and validation. The work looked at developing architectures for complex systems using existing architecture frameworks such as MoDAF and DoDAF, and visual modelling techniques such as UML, BPMN and Petri nets. The result has been a flexible, toolset independent framework for use by SyntheSys and its customers.

Prior to this project, Kirsten gained experience in computer forensics with Lothian and Borders police force at their headquarters in Edinburgh and has fifteen years experience in systems engineering-related employment.



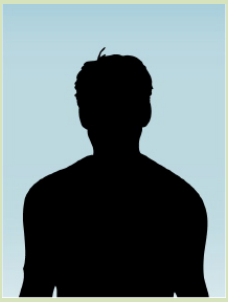
Anders Söderberg received his Master of Science in Computer Technology at Linkoping University 1983. After many years as a business developer in the telecommunications industry and justice system, he has been for the last five years working with several capability development projects within the Swedish Armed Forces where Enterprise Architecture has played an important part.

Dr Robert Suzić is employed as an Enterprise Architect contractor at the European Space Agency (ESA) dealing with complex systems (of systems) engineering issues.

He is an expert in frameworks such as MODAF, UPDM and TOGAF. His current main tasks at ESA encompass: technical quality supervision of R&D industrial activities, development of methods for model based requirements engineering, dealing with complex system architectural issues, consolidating and improving Space Situation Awareness (SSA) systems requirements and Requirements elicitation of Competence Management tools by following the TOGAF methodology.

His previous ten years' work experience was focused in the defence field. His main tasks during that period included:

- Capability based model development for the procurement of socio-technical systems by using MODAF for the Swedish Armed Forces.
- Methods for Knowledge Representation, Behaviour modelling, Sensor Management (e.g., UAV control), decision support, and situation and threat assessment for Swedish Defence Research Agency.
- Introduction of collaborative tools for Saab Group.
- Delivery of a framework for promoting distributed training and experimentation amongst different EU Member States for European Defence Agency (EDA).
- Standardisation work that describe net-centricity and interoperability across multiple levels spanning from technical to operational for Net Centric Operations Industry Consortium (NCOIC).



Edwin Swidenbank has 30 years experience in System Engineering, including 10 years in model-driven engineering.

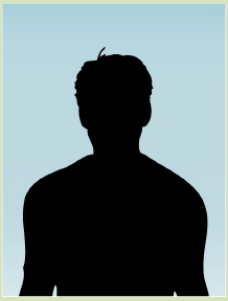
From his early career as an academic research leader and consulting engineer, he has made the transition to the defence industry via the communication and automotive sectors. For the past three years he has supported SEIG in the development of SOSA. He is currently the Chief Engineer for the SOSA support contract.

Lt Col Edlin Tan, Assistant Chief Information Officer (NS Matters) MINDEF Information Systems Division, Ministry of Defence (MINDEF), Singapore

Edlin Tan is currently the Assistant Chief Information Officer at the MINDEF Information Systems Division. In his current appointment, he is responsible for the Business Transformation Programs in the Human Resource Line of Business and Training Management Line of Business.

He also assists Hd BPMD in maintaining the Enterprise Architecture (EA) Framework and championing the application of EA in MINDEF/SAF.

Education
Bachelor of Science in Mathematics (Honours, 2nd Class Upper), University of New South Wales, Australia (1988)
Masters of Science in Industrial and System Engineering National University of Singapore (1999)
Diploma in Business Administration University of Western Australia (2000)
Specialist Diploma in IT Security Nanyang Polytechnic, Singapore (2007)
Certified Practitioner in The Open Group Architecture Framework, TOGAF (2009)



Luke Tucker - HIRA Technical Lead, Niteworks:
Luke has ten years engineering experience within Defence, and over the last 4 years has specialised in the application of service-based architecture approaches within the C4 & ISTAR domains. Luke was a member of the Niteworks team which developed a new Capability Planning & Delivery Methodology for Cap ISTAR and is currently supporting its roll-out across all functions of Cap ISTAR and Cap CCII. Luke is also Technical Lead for the UK MOD High-Level ISTAR & IO Reference Architecture (HIRA) - a common reference framework to facilitate architecture coherence and re-use.

Dr Matthew West is a Director of Information Junction, which he cofounded in 2008, and a Visiting Professor at the University of Leeds. Before 2008 he worked for Shell for 30 years. Since 1987 he has worked on the computing/business interface with a particular interest in information management, information quality, master and reference data, data modelling and ontology. He is a key technical contributor to ISO 15926 - "Lifecycle integration of process plant data including oil and gas production facilities" and is participating in the development of ISO 8000 - Data and Information Quality. Matthew is also author of "Developing High Quality Data Models".

Mike Wilkinson, BSc, PhD. Mike is the Technical Director of Niteworks where he is on secondment from Atkins. He is currently President of the INCOSE UK Chapter, co-chair of the INCOSE UK Chapter's Architecture Working Group and co-chair of the INCOSE International Architecture Working Group. Within Atkins, he is a Technical Director in the Defence Business Unit and Chair of the Systems Technical Network, which provides a focus for the development of systems thinking and systems engineering across the whole company. He is a visiting professor at the University of Loughborough, where he is associated with the Engineering Systems of Systems (ESoS) group.

Conference Gold Sponsor:

VEGA is a professional services company that delivers technology-enabled change in complex environments, often where security and resilience are key.

We offer independent expert advice and pragmatic solutions to help our clients meet their transformation challenges with confidence.

VEGA represents a wealth of EA technical expertise; built up over many years supporting the interoperability requirements of the UK MOD. We provide an independent assessment of the transformation objectives and, adopting the most appropriate toolset for the requirement, tailor solutions to match an organisation's specific transformation requirement.

This in-depth experience and domain knowledge now sees VEGA providing solutions to improve capability effectiveness at the operational frontline.

Conference Exhibitors:

Abatis (UK) Ltd **is a high technology, spin out company from Royal Holloway University of London.**

Abatis has produced new system integrity protection software called HDF which provides proactive, non-signature-based, anti-malware capabilities.

HDF has already proven itself to be an extremely effective way of proactively preventing infection by viruses, worms (including STUXNET), Trojans, key-loggers, rootkits, zero day attacks and targeted attacks, as well as defending against hacker attack, website defacement and vulnerabilities in legacy operating systems.

HDF is an efficient, kernel-level software security solution that protects current and legacy Windows versions from NT to the latest 64 bit Windows 7, as well as Red Hat Linux.

HDF's tiny footprint (30KB for workstation, 60KB for server) makes it ideal for low power devices, mobile platforms such as Android, Win7 mobile, etc. and embedded systems.

For further information contact Kerry Davies on +44 (0) 7767 240799

or Kerry@abatis-hdf.com .

Generic has provided high-quality business- and technology consulting to the defence sector since 1993. As a vendor independent company, we support our clients in improving their business, information and technology. Our areas of expertise complement each other and allow us to approach our clients with a holistic viewpoint, ensuring that each project we participate in creates value in coherence to the overall picture in an effective and efficient way. Our consultants have deep knowledge and a broad set of skills together with a passion for solving problems and achieving the goal at hand. Our services include Business analysis and development, Enterprise Architecture, Information management, Process- and information modelling, Requirements management, System specification, Acquisition support, etc.

Experiencing strong demand for its technology and architecture services, **Glue Reply** is continuing to innovate to meet the needs of the Defence sector. A unique combination of architecture, integration, data and technology know-how enables Glue Reply to provide Defence organisations with a clear blueprint for the future. Glue Reply empowers the CIO by enabling improved management and control over operations, a more effective portfolio planning capability and the flexibility needed to react to change quickly

Glue Reply has a footprint in many sectors including retail, telecoms, financial services, utilities and defence. Set up in 1999, its clients include: Marks & Spencer, AXA UK, Boots, Cable & Wireless, Sainsbury's, Ministry of Defence, NATO, BAE Systems, Rolls-Royce and National Grid.

Glue Reply is part of the Reply S.p.A network of companies. The Group employs approximately 3,500 people worldwide and has offices in UK, Italy, Germany, the Netherlands, Belgium, Brazil and the USA.

MEGA helps organizations collaboratively describe and manage large system architectures in accordance with internationally recognized standards such as DoDAF, MODAF, and NAF. MEGA's expertise and leading modeling tools are well-suited to the system of system architecture needs.

Our software solution is reinforced by 20 years of process expertise from MEGA's international team of consultants. MEGA consultants provide a prioritized understanding of risks and their impact on business. They help implement a consistent solution that is adaptable to the specific needs of the organization.

Clients include Airbus, BAE Systems, EADS, Eurocopter, GeoEye, NASA, Nissan, the Ministry of Justice, Renault, Thales and the US Departments of Agriculture, Homeland Security, and Transportation.

MooD International is a next generation software provider that challenges the way technology is deployed to improve enterprise performance. Its MooD technology helps leaders gain transparency and control of their business, addressing complexity, strengthening critical decision making across the enterprise portfolio, and driving considerable gains in the deployment of cost and capital.

Since its formation in 1996, MooD International has grown into one of the most respected and successful companies in its field: a world class team with award-winning technologies, providing innovative solutions based on ground-breaking ideas.

In recent years MooD solutions have been instrumental in delivering efficency gains and savings to the tune of hundreds of millions of pounds to the British Government and to the economies of major enterprises. It provides solutions to the defence, central government, commercial sectors, national security communities and to other sectors via industry alliances.

The Niteworks Partnership

Niteworks is a partnership between the UK Ministry of Defence (MOD), including Dstl, and industry.

Drawing on the partnership Niteworks establishes appropriate teams, applying relevant industrial and operational expertise and experience, to offer a unique collaborative and impartial environment in which the MOD and industry work together to make informed decisions for the MOD.

Our growing industry membership currently stands at 108 companies; made up of 96 associates and 12 partners. Over the last two years we have enjoyed rapid growth and in 2011 conducted over 60 projects of varying scope and duration

Media Partners:

Integrated-EA is owned and run by